1. Anion: (pronounced **an**-eye-yon) a negatively charged *ion*

2. Binary Compound: a chemical made of only two different elements

3. Bohr Model: a diagram that shows all the *orbitals* of an atom as “rings” around the nucleus with dots representing electrons put on those rings in a set order

4. Cation: (pronounced **cat**-eye-yon) a positively charged *ion*

5. Chemical bond: can be an *ionic bond* or a *covalent bond*; attachment of one atom to another because of *electron transfer* (*ionic*) or electron sharing (*covalent*)

6. Chemical formula: representation of a chemical using the chemical symbols of all different elements in that chemical and how many of each element are present (as *subscripts* **behind** the chemical symbol)

7. Covalent bond: (pronounced co-**vay-**lent) *chemical bond* between two nonmetals (or one metalloid and one nonmetal) that are sharing a pair of electrons

8. Covalent compound: (pronounced co-**vay-**lent) chemical that contains no metals, therefore electrons are shared between two elements in the chemical (can contain metalloids and nonmetals)

9. Electron dot model: (AKA Lewis model) a representation of an element showing only the *valence electrons* of that element

10. Electron transfer: when a metal gives one or more *valence electrons* to a metalloid or a nonmetal; the metal becomes a *cation* and the metalloid or nonmetal becomes an *anion*, bonding the two together as an *ionic bond*

11. Ion: (pronounced **eye**-yon) any element that has given or taken at least one *valence electron*

12. Ionic bond: (pronounced eye-**yon**-ic) *chemical bond* between a metal and a metalloid or nonmetal that is the result of the metal giving *valence electrons* to the metalloid/nonmetal, who takes the *valence electrons*

13. Ionic compound: a chemical made of a metal and a metalloid or nonmetal

14. Ionize: when a metal gives one *valence electron* (making it +1 for each electron given) , or when a metalloid/nonmetal takes one *valence electron* (making it -1 for each electron taken)

15. IUPAC Nomenclature: (pronounced **eye-**you-**pack**  **noh-**men-**clay-**chure) rules governing the naming of any chemical *compound*; the rules are slightly different between naming *ionic compounds* and *covalent compounds*

16. Octet Rule: (pronounced ahk-**teht**) handy rule to remember how many *valence electrons* most elements want to have, which is 8; metals give away *valence electrons* to drop to an inner *shell* and metalloids/nonmetals take or share *valence electrons* to fill up the current *shell*

17. Orbital: (pronounced **or-**bit-**tuhl**) AKA *electron shell*, AKA energy level; portion of the electron cloud where electrons are likely to be found; represented by the rings in a *Bohr model*

18. Periodic Law: When arranged according to atomic number (as in the Periodic Table), elements show repeating patterns in their chemical and physical properties.

19. Shell (electron shell): AKA *orbital*, AKA energy level; portion of the electron cloud where electrons are likely to be found; represented by the rings in a *Bohr model*

20. Subscript: miniature letter or number that appears behind a variable or chemical symbol; in *chemical formulas* this is a number that tells how many atoms of an element are in it

21. Valence electron: (pronounced **vay-**lens) electron that is found in the *orbital* furthest from the nucleus, usually called “the outermost energy level/*shell*/*orbital*”; these are used for *chemical bonds*

22. Valence shell: (pronounced **vay-**lens) the outermost energy level/*shell*/*orbital* or an atom; *valence electrons* come from this region of the electron cloud and are used for *chemical bonds* according to the *Octet Rule*